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PROVISIONAL APPLICATION COVER SHEET

request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53(b)(2).

Docket #: 5068-7P	Type a plus sign (+) inside this box→	+

INVENTOR(S)/APPLICANT(S)

NAME *(First, Middle, Last)*	RESIDENCE *(City and either State or Country)*
Alex MASHINSKY	Memphis, TN

TITLE OF THE INVENTION *(280 characters max)*

Exchange of Newly-Added Information Over the Internet

CORRESPONDENCE ADDRESS

Edward M. Weisz, Esq.
(212) 687-2770

Cohen, Pontani, Lieberman & Pavane
551 Fifth Avenue, Suite 1210
New York, New York 10176

ENCLOSED APPLICATION PARTS *(check all that apply)*

[x]	Specification	*Number of Pages* [12]	[]	Other *(specify):*
[x]	Drawing(s)	*Number of Sheets* [2]		

METHOD OF PAYMENT *(check one)*

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The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government

[x] No
[ ] Yes, the name of the U.S. Government agency and the Government contract number are: _
[x] Small Entity Status is claimed

Respectfully submitted,

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COHEN, PONTANI, LIEBERMAN & PAVANE
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

By: _____
Edward M. Weisz
Reg. No. 37,257

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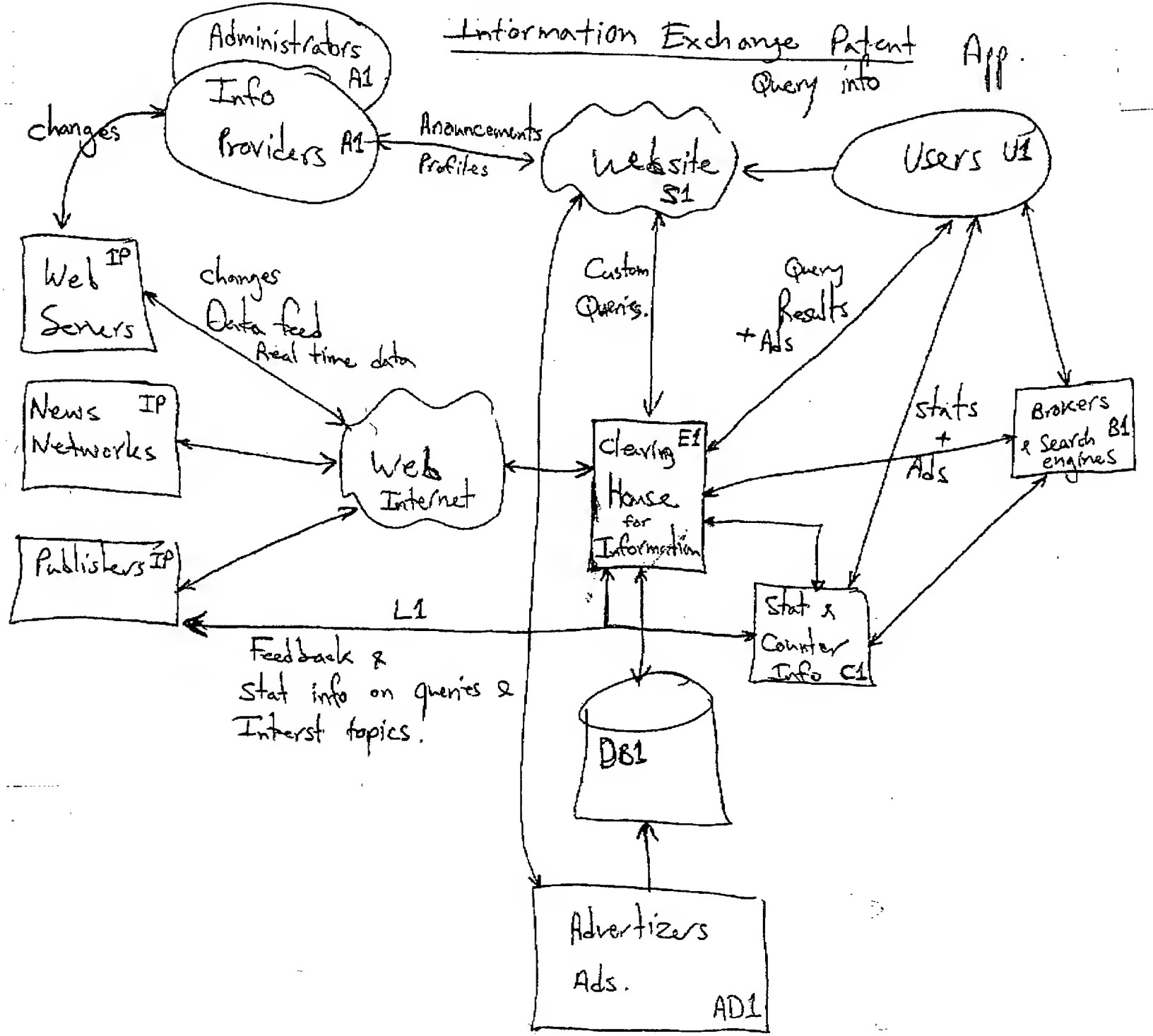
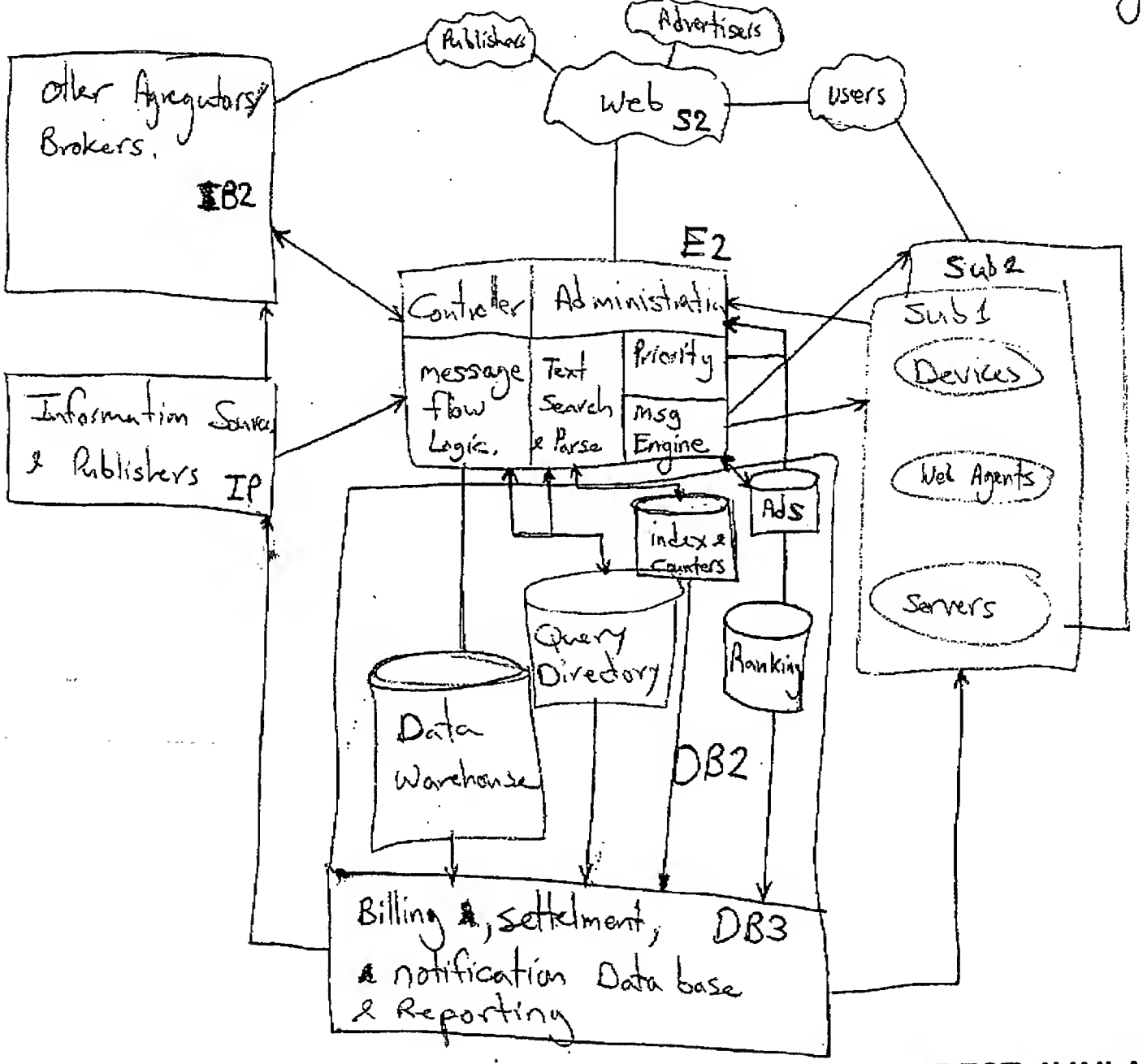


Fig 1

Information Exchange Patent

Fig 2



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UNITED STATES

PROVISIONAL PATENT APPLICATION

Exchange of Newly-Added Information Over the Internet

Inventor:

Alex MASHINSKY

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

The internet has grown to have several billion addresses. Each one of these addresses may have a web site and content which changes without notice or the web sites may be dynamically linked to other sites or to devices. Such changes in content and linkage may occur several thousand times a day. Oftentimes these changes are initiated by third parties so the administrators of these sites don't always know of such changes. The increasing need for reliable and up to the minute search and news information has made it more and more difficult to find and rank (e.g. by most recent order) the information one is looking for in the ever growing global internet.

Most existing search engines focus on crawling and indexing an existing and mostly static inventory of web sites. Because of the sheer size of the internet there is a growing lag between the time a new or existing site or content is being published and the time such information becomes available as indexed data on popular search engines. Although most information on the web is free, many subscribers are willing to pay for such information if it was delivered in a "ranked and indexed" format to each subscriber based on the queries supplied by the requestor of the information. It is the intent of this invention to provide a method and system for supplying such ranked and indexed information as a premium (e.g. pay) service to users.

As the global economy becomes more and more integrated, access in real time to the latest relevant information becomes a critical part of doing business and makes the difference between successful and lagging companies. Presently, the majority of such information is delivered over proprietary networks and is used primarily by industries which rely on information such as the financial markets. The information is provided without any filtering and it is up to the user to find relevant data in the avalanche of daily news and press announcements. Although some search functions are available, they only provide limited access and cost additional fees. The concept of broadcasting the news to many subscribers is not new but until now there was no single location which was aggregating all such information sources and provided controlled and query based dissemination of such information in real time.

This patent describes a novel way to operate an information exchange which will aggregate and provide access to information which was recently published, process it and distribute such information to people who expressed interest in it. This invention also allows advertisers and information providers to piggy back on such data delivery system and deliver custom ads and other information to subscribers based on the originating topic, time, relevance and queries such subscribers have placed in the system. Many other uses for such system will emerge as niche providers will use the information exchange to be able to use the information flow to trigger web services and custom applications as well as notifications resulting for the information or the results generated by processing such information flow.

Google or Yahoo/Overture allow publishers and company owners to submit information to be included in their search engines as well as crawl the web to index many types of web pages. New technology standards are emerging to allow publishers and corporations to broadcast any changes or additions they make to their web sites, directories, news groups or press announcements to third parties in an automated way.

This invention describes a way of aggregating all such published data as well as actively collecting data from sites that do not publish their changes and process every message to match it to search and profile query entries made by subscribers. Subscribers who are interested in being informed about specific news or announcements and changes made by specific companies may go to a web site and request such notifications to be sent to them in a specific format and to a specific device. The information exchange may also receive such requests via other programs, brokers or aggregators or search engines in a "wholesale" data feed. Such requests may be generated each time a search is performed on a computer or on the web and a user is asked if he would like to be notified about new results on such a search in the future. If the user accepts such invitation, the simple query is combined with other information provided by his computer, web service or the search engine used and is translated into a complex query which is entered into the information exchange as a standing request. The information exchange compares every bit of new data collected and matches it to the existing list of queries. Any match is analyzed through a logic

flow, and then text searched and prioritized before the message engine translates it into a link or combines it with other statistical or relevant data and sends it to the subscriber or agent (e.g. broker, etc.) who has ordered the query on the exchange. The exchange may attach advertising or promotional information provided by third parties based on the subscribers query or based on the topic sent to the subscribers profile. The exchange charges these third parties for distributing such information based on pre agreed amount, a transaction fee or based on a dynamic market in which advertisers bid for the right to be first in line for such notifications. The information exchange may employ artificial intelligence or other tools to better match the flow of information to the queries in the system as well as self train the system to allow the users to prioritize and narrow down their queries to relevant information aggregated by the exchange.

This information exchange mechanism allows to bypass the traditional way of simply submitting a press release with the hope that people will read it. The old system is replaced with a system which will proactively collect new releases, process their content and if a match is found, forward a link about such press release to a specific set of subscribers who have indicated interest in receiving such information. By indicating certain keywords or subjects to the information exchange or other collection programs, a continuous monitoring of millions of information sources can be achieved with minimal effort and very low cost. Such notices can be sent within fractions of a second of receiving such information to any of a variety of communication devices which include wireless devices, computers and other communications devices. The messages can

appear in a variety of formats and support existing standard and proprietary systems such as email, instant messengers, SMS and Bloomberg terminals. The information exchange will also provide client software and personal web-logs which will allow subscribers to manage their accounts, queries budgets and prioritization.

The Information exchange may have a direct XML or other feed from every publisher and from every web server indicating new list of updated content or changes to existing content. Such list of changes may be organized under standard NAICS/SIC codes or use XML headers for classifications to allow easier matching and distribution to interested parties. Such links may allow owners of content to publish specific information while keeping other information confidential. Many sites do not allow crawlers or non subscribers to access their internal data and so the majority of the information on the web is not accessible to search engines. In contrast the information exchange can act as a trusted partner in collecting, processing and notifying specific subscribers with specific information which otherwise would not be available.

Another purpose of this invention is to provide a technique to translate such flow of information into a profit for the originators, aggregators of queries, subscribers and advertisers of the information exchange. Google, Yahoo and other search engines use a system by which advertisers bid for listing order linked to keywords which then translate into commercial listings provided side by side with the free search results provided by the search engines. The providers of the information and the users of the

search engines do not have a way to make a portion of the fees charged by the search engine. In addition the ability of the buyers of the keywords to refine their hits is limited since Google knows very little about the person performing the search or his real intent to buy or do commerce. The information exchange will allow publishers, aggregators, subscribers and information providers to receive a portion of the fees charged by the exchange. Another source of revenues is the collection and sale of statistical and usage information about transactions conducted by the exchange.

In addition, the proposed system manages an expended list of topics subscribers have interest in and provides proactive notification and formatting of such data each time the topic appears on the net in the context requested by the subscriber. This process allows advertisers and businesses to target customers in a much more accurate way. It allows customization of when and what to send to each subscribers and allows for different messages and different prices to be sent based on the specific events the exchange generates. For example an advertiser may indicate to the clearing house that an ad about life insurance should be sent to all subscribers who have entered the word "disaster" only when news about a disaster event passes through the information exchange. In a similar way a manufacturer may request to send a specific ad with a specific price each time a news release or posting about a product from a competitor passes through the exchange. Such notice may be sent only to a specific set of subscribers which have provided a profile accepted by the manufacturer.

The information exchange may also provide, or allow others to provide, a counter and statistical analysis about the information flowing through the exchange and trigger notifications to user when certain events occur. An example would be when a business owner wants to know that the number of times a competitor is mentioned in the news exceeds a certain number or exceeds the number of times his own company is mentioned. Such proactive search and message delivery also allows subscribers of the information exchange to rank information sources and direct such data flow to specific inboxes or locations. Such ranking allows advertisers and businesses to better target their ads and get a higher ratio of conversions to orders or visits to their sites.

In a similar way, the information exchange may be used by information providers or third parties for custom notifications and the creation of a dashboard like facilitator which will collect alarms and notification information from the web and from third parties.

Subscribers may bid to be ranked highest to effect the order by which notifications may be sent out as well as the time delay the subscriber may ask before the message may be sent out to others.

The examples mentioned above represent only a small fraction of the uses such information exchange may provide to businesses and individuals who need to be notified about events and changes occurring worldwide. The information exchange may also act as a third party web service clearing house to many other search engines and

web sites who would like to outsource the notification and management of their subscribers. It will allow a concentrated and managed notification mechanism which will simplify and provide for a manageable individual portal of notifications and information. Such solution may be integrated with existing email or IM programs to provide integrated messaging.

The information exchange may charge some publishers for their data while paying other publishers for theirs. For example a company issuing a press release may have to pay for submitting its data to the exchange while a newspaper writing about such press releases may be paid by the exchange for its submission. In a similar way a subscriber to the exchange may pay to receive notifications from specific information sources while being paid each time he reads a notification from others. The exchange job is to collect, process, notify and settle the financial results of each transaction triggered by the exchange based on a pre agreed financial formula entered by its members. This invention allows to create a market place for the transfer and distribution of information and provide real time market pricing for different sources of information. Subscribers and publishers may use such information to sell information based on a pre agreed price.

The drawing attached provides for an explanation of the data flow and the interaction between the three parties (information, providers, subscribers, advertisers) and the exchange.

Figure 1 depicts the interaction between the different elements of the exchange. Activity on the exchange is initiated when new data is generated by publishers, web services, news networks or other information sources (IP). These sources are linked to the exchange via the Internet and the web or direct communication feeds L1. The administrators of the information sites A1 can also access a web site S1 through which they can administrate their interaction with the exchange E1. Users U1 may access the exchange via the web site S1 or by entering searches via brokers and search engines B1. such entries are then translated into one time or ongoing queries with E1 or C1.

The third source of information are the advertisers AD1 who use the website S1 and the database DB1 to place bids and contract with the exchange and its partners to deliver specific ads and information to the target audience.

The information collected in E1 is processed and divided into specific flows as described in Fig 2. The information flow from the IPs is collected into a message logic flow (E2) which determines the source, content, priority, size, relevance and uniqueness of the information. Other attributes can be added since all such information is derived from the XML and protocol information provided with the links. The data may be compared to other information resident in DB2 and forwarded to other parts of E2 or discarded. Other aggregators or exchanges B2 may exchange additional information flows with E2. They are managed by controllers that verify and handle communication

and content delivery. After content is processed by the E2 logic engine a specific set of searches is conducted by the search engine against a text index and database search entries in DB2 to find matches and related links. The matched results then are entered into a prioritization engine which uses entries to rank the results and hand them off to the administration part of the exchange which accesses DB3 to confirm the parties who need to be notified their status, credit standing and hand them off to the message engine which packages the results with specific ads or other results and forwards them in the format and schedule provided by the subscribers to the predetermined destination. Such destination may be an internal web-log or external email or communication devices or servers. after each notification a billing record is generated by the different elements of the exchange and sent to DB3 so real time settlement and billing information can be generated for internal use as well as the use of the outside users of the exchange.

Some steps described above may be skipped if for example the subscriber is a search engine which is using the exchange to collect all the data published who is not billed for the information and is not receiving any advertisements from the exchange.

A subscriber Sub1 may enter a web site S2 and place orders to search for one or multiple topics. Such entry will be distributed by E2 to multiple databases in DB2 and compared to historical results. The sub may get instant feedback on the frequency of such information and the likely sources to provide such information in the future. He

may then modify the request or confirm his entry. Upon confirmation the different DB2 databases together with available DB3 data will determine if such a query is free or should be charged and will notify the sub. If the transaction is accepted by both parties, all relevant DB2 depositories are updated and all new information from IP & B2 is attempted to be matched. If a match occurs, relevant ads and other information is packaged and sent out to the sub.

An advertiser may enter web site S1 and identify key words and events which he may be interested to be linked to, he may view historical traffic volumes and prices paid by other advertisers for those categories or he may place complex instructions with the E2 administrator DB to initiate ads or notifications under certain specific conditions. Such entries are processed by E2, DB2 & DB3 and are followed to optimize the matching and spending by advertisers on the information exchange.

The different parties using the exchange may interact and view different parts of the reporting engine in DB3 which will present to them the real time status of their accounts, the financial and historical transactions, and the trends and activities of the different members.